

OCEAN GALES AND STORMS, SEPTEMBER 1941

Vessel	Position at time of lowest barometer		Gale began September	Time of lowest barometer, September	Gale ended, September	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Direction and highest force of wind	Shifts of wind near time of lowest barometer
	Latitude	Longitude									
NORTH ATLANTIC OCEAN											
A vessel	38 30N.	59 24W.	3	2p, 2	3	1,006.4	WNW	WNW, 5	NW	WNW, 8	W-WNW.
Do.	36 54N.	62 18W.	6	4a, 7	7	1,010.5	SW	WSW, 7	NW	WSW, 9	WSW-NW.
Do.	11 50N.	74 50W.	8	4a, 8	10	1,006.4	ENE	ENE, 5	E	ENE, 8	None.
Do.	28 32N.	88 18W.	12	2p, 12	12	1,007.1	SE	E, 8	E	E, 8	S-E.
Do.	28 06N.	90 18W.	12	6a, 13	13	1,002.7	E	N, 5	ENE	ENE, 8	ENE-NNW.
Do.	25 54N.	86 00W.	18	6a, 19	19	1,009.1		ESE, 2		ESE, 8	
Do.	28 32N.	74 17W.	19	2p, 19	21	1,001.7	SSW	Var., 2	W	NNE, 10	SSW-Var.-NE.
Do.	30 30N.	70 42W.	19	4a, 20	22	1,003.4	SE	ENE, 10	ENE	E, 11	ESE-NE.
Do.	30 11N.	71 42W.	19	4a, 20	20	1,006.4	ENE	E, 7	ENE	ENE, 8	
Do.	30 00N.	70 10W.	20	6a, 20	22	995.3	ENE	SSW, 5	E	E, 9	SW-SSE-ENE.
Do.	29 25N.	70 20W.	20	7a, 20	21	999.0	NE	S, 6	ENE	ENE, 10	S-NE.
Do.	24 52N.	87 41W.	20	3p, 20	22	1,002.0	ENE	ESE, 8	E	E, 10	ENE-ESE-E.
Do.	29 24N.	70 36W.	20	4p, 20	21	995.9	SW	SW, 7	ENE	ENE, 9	SW-E.
Do.	25 54N.	85 42W.	17	4p, 20	21	1,006.4	E	E, 6	ESE	E, 8	
Do.	29 42N.	70 24W.	20	5p, 20	22	997.6	E	ENE, 10	ENE	NE, 11	SSW-E-NE.
Do.	28 12N.	71 12W.	20	2a, 21	21	1,000.0	E	NNW, 4	NNW	NE, 8	NNE-W.
Do.	29 36N.	72 00W.	19	6a, 21	21	1,000.3	ESE	NE, 6	WSW	ENE, 11	ENE-NE-SW.
Do.	26 42N.	88 24W.	20	4p, 21	22	1,001.7	ENE	E, 9	ESE	E, 9	E-ESE.
Do.	26 43N.	87 50W.	21	4p, 21	22	1,002.4	E	E, 8	ESE	E, 9	ENE-ESE-E.
Do.	26 40N.	87 55W.	20	4p, 21	22	1,004.4	ENE	ESE, 8	ESE	E, 9	ENE-ESE-E.
Do.	32 18N.	75 00W.	21	6a, 22	22	1,002.0	NE	ENE, 5	W	NE, 9	NE-E.
Do.	32 55N.	72 43W.	20	12m, 22	22	998.0	ENE	SSE, 9	SSW	SSE, 9	ESE-SSW.
Do.	28 30N.	93 18W.	21	2p, 22	23	998.3	NE	E, 9	E	E, 9	NE-ESE.
Do.	26 50N.	94 05W.	21	3p, 22	22	990.9	NE	NNW, 7	SSE	NNW, 8	NNW-S.
Do.	34 48N.	75 06W.	21	4p, 22	22	1,009.1	NE	NNE, 8	NNE	NNE, 8	
Do.	33 12N.	72 58W.	22	4p, 22	22	1,000.0	SE	SE, 8	SW	SE, 8	E-SW.
Do.	27 06N.	93 42W.	21	6p, 22	23	985.8	NE	E, 9	S	NE, 12	NE-SE.
Do.	25 48N.	94 00W.	22	6p, 22	22	1,000.0		W, 5		NNW, 8	NW-SW.
Do.	27 00N.	95 00W.	21	7p, 22	23	987.5	ENE	W, 5	S	N, 10	NNW-NE-WSW.
Do.	34 13N.	75 09W.	21	8p, 22	23	1,004.7	E	NE, 5	NNW	E, 8	NE-NW.
Do.	35 04N.	74 22W.	21	12p, 22	23	995.9	NE	N, 10	NE	N, 11	N-NE.
Do.	34 08N.	75 30W.	21	4a, 23	23	1,005.8	NE	NNW, 8	NNW	N, 9	NNW-NNE.
Do.	36 00N.	75 00W.	21	4p, 23	23	1,005.8	NE	NNW, 7	NNW	NE, 8	SSE-SW.
Do.	28 42N.	94 00W.	21	12p, 23	24	1,010.0	E	S, 12	WSW	S, 12	ENE-E.
Do.	15 20N.	81 50W.	27	12m, 27	27	1,000.3	ENE	E, 9	E	E, 9	NE-E-ESE.
Do.	16 00N.	86 48W.	27	8a, 28	28	992.9	NE	E, 2	SE	NE, 12	NNW-SW-SE.
Do.	16 00N.	87 24W.	28	10a, 28	28	996.6	N	SW, 6	E	SE, 11	NNE-SSE-SE.
Do.	16 16N.	87 43W.	28	11a, 28	28	997.0	N	SSE	E	SSE, 8	NNE-SSE-SE.
Do.	16 00N.	88 30W.		12m, 28		999.7		W, 9		W, 9	
Do.	17 20N.	88 02W.	28	3p, 28	28	1,002.7	NE	E, 9	SE	E, 9	ENE-SE.
Do.	39 00N.	47 00W.	30	3a, 30	30	1,009.5	S	S, 8		S, 8	S-W.
NORTH PACIFIC OCEAN											
A vessel	16 40N.	157 12E.	1	8a, 1	1	983.4	NW	W, 11	S	S, 11	NW-S.
Do.	25 36N.	142 48E.	4	4a, 5	5	995.9	NE	WNW, 7	SE	WNW, 8	NNW-WSW.
Do.	20 20N.	106 50W.	7	2p, 8	8	1,005.1	E	NE, 6	NNE	ENE, 8	ENE-NNE.
Do.	20 42N.	107 30W.	9	7a, 9	9	1,001.4	N	NNW, 9	NW	WNW, 10	NNE-NW.
Do.	39 40N.	176 42E.	10	4a, 11	11	1,006.8	NE	NNE, 7	SSE	SSE, 8	NE-NNE-E.
Do.	24 36N.	133 00E.	14	7a, 15	17	979.0	NE	NE, 10	S	S, 12	N-SE.
Do.	15 03N.	137 01W.	15	4p, 15	15	993.9	W	NNW, 4	NW	W, 8	W-NE.
Do.	12 32N.	116 32E.	13	5a, 16	17	983.7	NE	ESE, 12	S	NE, 12	ENE-SE.
Do.	20 -N.	107 -W.	19	4p, 19	19	937.0	E	Var., 1	SW	SW, 12	NE-Var.-SW.
Do.	22 21N.	110 07W.	20	4p, 20	20	992.2	NW	WNW, 11	SW	WNW, 11	NW-W.
Do.	14 23N.	97 30W.	20	4a, 21	21	1,004.1	WNW	WNW, 6	W	WNW, 7	None.
Do.	14 00N.	95 42W.	24	4p, 24	24	1,007.1	SW	SW, 7	SW	SW, 7	None.
Do.	14 57N.	96 23W.	24	5p, 24	25	1,005.8	S	SW, 7	W	SW, 7	

¹ Position approximate.² Barometer uncorrected.

WEATHER ON THE NORTH PACIFIC OCEAN

By WILLIS E. HURD

Atmospheric pressure.—Following the condition of high pressure over the central Aleutians in August, there was a considerable barometric fall in September, and though the average readings at Dutch Harbor and St. Paul Island were above normal, the early autumn Aleutian LOW, pressure 1,009 millibars (29.80 inches), had become established.

From Juneau to Mazatlan, on the American coast, and at Honolulu, Midway Island, and Guam, pressures were below normal, unusually so at Honolulu, where the average, 1,012.5 millibars (29.90 inches) was 3.4 millibars (0.10 inch) below.

The North Pacific HIGH was central, during most of the month, principally to the northeastward of the Hawaiian Islands.

TABLE 1.—Averages, departures, and extremes of atmospheric pressure (sea level) at selected stations for the North Pacific Ocean and its shores, September 1941

Stations	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	Millibars	Millibars	Millibars		Millibars	
Barrow ¹						
Dutch Harbor	1,009.0	+1.2	1,030	8, 9	988	28
St. Paul	1,009.3	+3.2	1,026	8	990	24
Juneau	1,011.9	-1.3	1,027	6	999	3
Tatoosh Island	1,015.2	-1.7	1,028	21	996	10
San Francisco	1,012.2	-1.7	1,019	3, 28, 29	1,007	7
Mazatlan	1,008.0	-1.8	1,011	29	1,003	20
Honolulu	1,012.5	-3.4	1,017	29	1,009	8
Midway Island	1,014.8	-1.5	1,019	2	1,006	9
Guam	1,008.6	-1.6	1,014	10	1,005	2, 3, 26
Manila ¹						
Hong Kong	1,008.1	0.0	1,013	25	1,000	15

¹ Data insufficient for use.

NOTE.—Data based on 1 daily observation only, except those for Juneau, Tatoosh Island, San Francisco, and Honolulu, which are based on 2 observations. Departures are computed from best available normals related to time of observations.

Extratropical cyclones and gales.—While there was some movement of depressions in middle and higher latitudes, according to the rather limited ships' reports over a great area, stormy weather seems to have been extraordinarily infrequent for the season. Two gales were reported, both of force 8. One was experienced near 40° N., 177° E. on the 11th; the other west of southeastern Alaska on the 15th.

Tropical cyclones—Typhoons.—Subjoined is a report by the Rev. Bernard F. Doucette, S. J., Weather Bureau, Manila, P. I., on five typhoons and two depressions that occurred in the Far East during September.

Further, concerning the typhoon of the 7th to 17th, a vessel east of Hong Kong entered the fresh-gale area of the cyclone on the 14th and left it on the 16th. While the storm was changing its course and moving slowly, the observer reported that the "vessel was within the radius of hurricane force winds for 50 hours." The ship's lowest barometer was 983.7 millibars (29.05 inches) on the morning of the 16th, near 22½° N., 116½° E.

In connection with the typhoon of September 12–20, a vessel close to the center of the storm on the 15th, near 24½° N., 133° E., had an uncorrected barometer of 979 millibars (28.91 inches) and a northeast wind of force 10 at 7 a. m., followed by a hurricane wind from the south later in the day.

Cyclones west of Mexico.—While there are evidences of localized, unsettled weather conditions that threatened development into cyclones on other occasions, at least two hurricanes are known to have occurred in Mexican west coast waters, one on about the 8th to 12th; the other on about the 17th to 20th.

The earlier was first reported by a ship having a moderately depressed barometer on the 8th and a northeasterly gale of force 8, near 20° N., 107° W. On the 9th another vessel, a few miles to the northwestward, had a northwest gale of force 10, with lowest barometer at 1,001.4 millibars (29.57 inches). The storm was then moving slowly toward the Gulf of California. On the 13th a press report from Mexico City told of the destruction wrought by it. Quoting:

The fiercest cyclone of this century for 48 hours, ending at noon yesterday, thrashed the southern end of the peninsula of Lower California. It demolished the towns of Santiago and Triunfo, causing 15 deaths and injuring many others. The wind, which reached an intensity of 85 miles an hour, completely demolished the poorer section of La Paz and razed villages near the city.

The highways of Lower California are reported to have been seriously damaged by the torrential rains, which abated somewhat tonight, leaving estimated thousands homeless.

In reporting on the second hurricane, one vessel quoted radio messages as stating the storm was central in 12° N., 100° W., on the 17th and near 14° N., 101° W., on the 18th, while another disturbance was then near 15° N., 111° W. An advisory on the 19th said the two disturbances had merged into a storm of considerable intensity near 17° N., 105° W. The ship quoting the advisories headed into the strong easterly winds on the north of the disturbance at 8 a. m. ship's time, of the 19th. At 1 p. m. the squalls became heavy and the barometer was falling rapidly, and at 2 p. m., amid hurricane gusts and practically zero visibility, some damage was done to the ship. Between 2:30 and 4 p. m. said the report of the second officer:

The barometer fell so rapidly that it could be seen moving down—from 29.25 to 27.67. At 4:30 the ship passed through the center of the cyclone. The wind died down to almost 0 and the low clouds opened up so that high cirrus could be seen through a small opening. There was a peculiar yellow light and the sea became bright green in color. The extremely low atmospheric pressure caused discomfort in the ears. High confused swells broke aboard the ship with

terrific force from all sides. In about 10 to 15 minutes the center passed and the wind came from the southwest, force 12 and over.

The reading 27.67 inches, occurring in 20° N., 107° W., is the second lowest barometer recorded in any hurricane in these waters. The lowest reading, 27.45 inches, occurred in the hurricane of October 25, 1939, in practically the same position, about 20° N., 106° W.

The storm advanced into the Gulf of California on the 20th, and at 4 p. m. of that date a vessel near 22° N., 110° W., had a west-northwest gale of force 11, barometer 992.2 millibars (29.30 inches). Nothing is known definitely regarding the subsequent history of the cyclone.

On the 21st and 24th westerly winds of force 7, with some barometric depression, south to southwest of the Gulf of Tehuantepec, indicate further disturbed weather, although accompanied by no known cyclonic development.

Fog.—Scattered fogs occurred in higher latitudes of the Pacific, but the only interesting occurrence is that of a vessel that entered fog on the 14th near 45° N., 170° E., remained in it without a break for two or three days, then observed it intermittently until the 19th, near 46° N., 162° W. Fog was reported on 4 days off the Oregon coast and on 13 days off the California coast.

TYPHOONS AND DEPRESSIONS OVER THE FAR EAST

BERNARD F. DOUCETTE, S. J.

[Weather Bureau, Manila, P. I.]

Typhoon, August 31—September 5, 1941.—The first indications of the formation of this storm were the pressure falls at stations along the eastern coast of Luzon, namely the regions about 60 or 70 miles northeast of Manila. On the morning weather map of August 31 there were certain signs of a typhoon forming rather close to the coast, or perhaps one that had formed some distance away and was moving rapidly toward Luzon. In the afternoon, the observations clearly showed the storm center to be about 60 miles east of Baler, Tayabas Province, small, but moving rapidly. During the night the center crossed Luzon, passing south of Casiguran and north of Baler, (both in Tayabas Province) north of Cabanatuan, North Ecija Province, and entered the China Sea via Lingayen Gulf, moving between Dagupan, Pangasinan Province, and Baguio, Mountain Province. Over the China Sea, the storm moved west-northwest, then west, to Hainan Island. Here it changed to the northwest, crossed the Gulf of Tong King, and disappeared over the continent on September 5.

Over the Philippines, August 31, the stations along the course of the storm reported pressure values between 747 mm. (995.9 mb.) and 750 mm. (999.9 mb.) with winds rather weak, considering the situation, the highest being force 6. This is due most likely to the sheltering effect of the mountains. No serious damage was reported, nor were any casualties mentioned in the Manila newspapers.

The upper winds over Cebu and Zamboanga were from the southwest and west quadrants, with velocities seldom reaching 30 k. p. h. Over Manila, the southwesterly current was as high as 45 k. p. h. on August 31 and September 1. Dagupan reported northwesterly winds up to 100 k. p. h. August 31, afternoon ascent, which was the only ascent possible during the course of the storm over Luzon. On September 1, Aparri, Cagayan Province, had winds aloft from the southeast quadrant with velocities as high as 100 k. p. h. These pilots indicate that there was much more activity aloft than at the surface stations protected by neighboring hills and mountains.